



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/726,341

12/03/2003

Philip C. Georgeau

CHE20 P-304A

9027

277 7590 09/10/2008

PRICE HENEVELD COOPER DEWITT & LITTON, LLP
695 KENMOOR, S.E.
P O BOX 2567
GRAND RAPIDS, MI 49501

EXAMINER

CHAPMAN, JEANETTE E

ART UNIT

PAPER NUMBER

3633

MAIL DATE

DELIVERY MODE

09/10/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/726,341	Applicant(s) GEORGEAU ET AL.	
	Examiner Jeanette E. Chapman	Art Unit 3633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

In view of the appeal Brief filed on 6/30/08, PROSECUTION IS HEREBY REOPENED. A non Final office action is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Brian Glessner/

Brian Glessner
Supervisory Patent Examiner
Art Unit 3633

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3633

Claims 1-2 and 4-7, are rejected under 35 U.S.C. 103(a) as being unpatentable over Zenor (5447006) in view of Venable (4996812) in view of Georgeau et al (6579924) .

Zenor discloses a roof structure for covering a roof substrate, comprising:

a roof substrate having an upper surface 36;

a membrane 36 of EPDM, column 1, lines 25-30, having an upper side and a layer of fleece material disposed on a first lower side of said waterproof membrane;

a deck 30; and

a layer of insulation 32 on said deck forming said roof substrate, said waterproof membrane adhesively bonded to said insulation by parallel beads of said adhesive.

Zenor lacks the materials of construction and the recited type of adhesive.

Venable discloses a roof structure for covering a roof substrate comprising:

- A roof substrate 10 having an upper surface
- A waterproof membrane of EPDM rubber 18 having an upper side and a layer of fleece material 22 disposed on the lower side of the membrane
- A polymer adhesive 15 disposed on the lower side
- The adhesive is disposed within the fleece material and contacts the upper surface of the roof substrate and thereby bonds the membrane to the roof substrate capable of defining a portion of a low slope roof of a building structure define a portion; see figure 3
- A metal decking or a fluted steel deck 12 having a plurality of elongated upper deck surfaces

Art Unit: 3633

- A layer of insulation 14 on the deck 12 forming the roof substrate
- The foam 14 may be considered substantially rigid as insulating foam may be constructed to be “substantially” rigid
- The water proof membrane in contact with the upper surface of the roof substrate

Zenor lacks the non-volatile adhesive comprising a silyl-terminated polymer and the silyl-terminated polymer comprises a silyl- terminated polyether. Georgeau et al discloses such an adhesive used to securing roofing membranes on pitched roofs. See column 1, line 10-17. See column 3, line 57 thru column 4, line 15.

In view of the above, it would have been obvious to modify Zenor to include the recited material in order to employ readily available, common and workable materials of construction in order to and to include the recited adhesive in order to provide shorter curing times which is also non-shrinking as taught by Georgeau et al.

The thickness of the membrane and the fleece or matting have been considered a matter of choice. Further, the measurement values for the bond strength and the viscosity of the adhesive are also measurement values that have been considered a matter of choice. One of ordinary skill in the art would have appreciated making the fleece/membrane, the bond strength and the viscosity of any measurement values suitable for the intended use function and purpose of the roof structure. The recited measurement values are very much within the scope of the invention to Venable. Further the significance and relevancy of the specific values lacks criticality, significance

Art Unit: 3633

and relevancy to the overall claimed/disclosed invention. Finding the optimal values providing the intended function for the structure requires mere routine experimentation..

Claims 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zenor in view of Venable (4996812) , Geroceau et al as applied to claim 1 and further in view of Naipawer, III. Zenor/Venable discloses a roofing membrane of EPDM but lacks the alternative material of PVC. Naipawer discloses a roofing membrane of EPDM or PVS. It would have been obvious to one of ordinary skill to employ the alternative material of PVC since it has been shown to be a suitable material for roofing membranes using adhesives.

Claims 8-14, 17-22, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Venable (4996812) in view of Geroceau et al and further in view of Van Wagoner (VW) (4719723). VW discloses a low sloping roof 46 shown in figure 3. VW also discloses a membrane 48 of EPDM rubber. In view of the above, it would have been obvious to apply the roofing membrane of Venable to sloping roof structures in order to impart the membranes to different roof configurations as taught by the VW.

For the other limitations see above rejections.

It is clear that if one used the moisture cured adhesive to bond the membrane to the foam substrate then one would also use the adhesive to bond the foam to the metal decking and to bond the foam to the fiberglass gypsum and to bond the fiberglass gypsum to the waterproof membrane in order to preserve the integrity of the roof deck. Venable does not show or disclose any mechanical fasteners.

Art Unit: 3633

Claims 15-16, 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Venable (4996812) in view of Geroeau et al and VW and further in view of Beck (4498267). . Beck discloses an upper layer of water proof material and an underlaying of fiberglass reinforced gypsum. See the abstract. In view of the above it would have been obvious to one of ordinary skill to include the fiberglass reinforced gypsum under the water proof membrane of Venable in order to optimize the strength while minimizing the weight and cost of the roofing structure as taught by Beck

It is clear that if one used the moisture cured adhesive to bond the membrane to the foam substrate then one would also use the adhesive to bond the foam to the metal decking and to bond the foam to the fiberglass gypsum and to bond the fiberglass gypsum to the waterproof membrane in order to preserve the integrity of the roof deck. Venable does not show or disclose any mechanical fasteners.

Claims 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Venable (4996812) in view of Geroeau et al and Van Wagoner (VW) as applied to claim 21 and further in view of Naipawer II. The base reference has been considered as described above and the secondary references have been applied to the base reference in the same manner as described above.

Response to Arguments

Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection.

The declarations and affidavits filed 6/25/07 are merely citations applicant considers as prior art. These references do not negate the previous and/or present

Art Unit: 3633

references applied against the claims. They merely give a disclosure of what is done in the art of materials and roofing substrate.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chapman E. Jeanette whose telephone number is 571-272-6841. The examiner can normally be reached on Mon.-thursday, 8:30-6:00, every fri. off.

Art Unit: 3633

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Glessner can be reached at 571-272-6841. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JEANETTE CHAPMAN/
PRIMARY EXAMINER
ART UNIT 3633